

REMARKS

Claims 1-14 and 16-21 are pending in this application. In view of the following remarks, the applicants request allowance of the application.

Claim Rejections under 35 U.S.C. §103(a)

Claims 1, 2, 4-9 and 11 are rejected under 35 USC 103(a) as being unpatentable over Vasudevan (US Pub. 2004/0225805) in view of Allen (USP 6,934,956).

The cited references, even when considered together, fail to disclose, either expressly or implicitly, each and every feature of the claimed embodiments.

Consider claim 1, which recites:

providing an interface to access a plurality of peripheral devices, ***the interface being independent of specific features of the peripheral devices and having a plurality of generic routines commonly shared by the peripheral devices***,

...

upon receipt of a request for a feature:

...

calling, by the interface, the generic routines as a function of the feature with the parameters of the identified peripheral device;
executing a native driver of the identified peripheral device; and
performing on the identified peripheral device the specific feature corresponding to the feature requested using the executed native driver

The Office Action relies upon Vasudevan to disclose the claimed features. Vasudevan at, for example, paragraph [0021], discusses:

A flowchart illustrating the logic used by the invention in providing communication between a processor and a peripheral device is shown in FIG. 3. The process starts by ***creating a socket for each*** of the processor(s) and the ***peripheral device that is desired to be communicated with***, which are respectively provided by blocks 90 and 92.

Accordingly, Vasudevan discusses that a specific socket is created for a peripheral device.

Vasudevan, at paragraph [0018] further discusses:

Application programs running in application layer 18 are enabled to access various hardware devices through use of ***socket API's corresponding to those devices*** operating in socket API layer 20 (as depicted by a video subsystem socket API 24, an external network socket API 26, and an storage

subsystem API 28), and logical to physical device interface mapping provided by network interface abstraction layer 22

Accordingly, Vasudevan fails to disclose, either expressly or implicitly, the claimed "providing an interface to access a plurality of peripheral devices, ***the interface being independent of specific features of the peripheral devices and having a plurality of generic routines commonly shared by the peripheral devices***, ... upon receipt of a request for a feature: ***...calling, by the interface, the generic routines as a function of the feature*** with the parameters of the identified peripheral device; executing a native driver of the identified peripheral device," because Vasudevan uses an API layer with sockets specific to the peripheral devices. Accordingly, because the sockets are specifically created for each peripheral, Vasudevan's sockets are not "independent of specific features of the peripheral devices and having a plurality of generic routines commonly shared by the peripheral devices," as recited in claim 1.

The Office Action merely relies upon Allen to disclose that "a driver contains information needed to send output to and/or receive input from the device. Thus, for example, when a computer sends a print job to the printer, the computer could do so through the printer driver using the correct parameters."

Accordingly, a *prima facie* case of obviousness cannot be based upon Vasudevan and Allen because there is no evidence that one of ordinary skill in the art would combine Vasudevan's socket API with Allen's disclosure of printer drivers, and modified the combination to include the claimed "providing an interface to access a plurality of peripheral devices, ***the interface being independent of specific features of the peripheral devices and having a plurality of generic routines commonly shared by the peripheral devices***, ... upon receipt of a request for a feature: ***...calling, by the interface, the generic routines as a function of the feature*** with the parameters of the identified peripheral device; executing a native driver of the identified peripheral device," as recited in claim 1.

For the foregoing reasons, withdrawal of the rejection of claim 1 is respectfully requested. The dependent claims refer to independent claim 1, and therefore patentably distinguish over the cited references.

Claims 12-13 are rejected under 35 USC 103(a) as being unpatentable over Khanna (US Pub. 2002/0147870) in view of Edmonds (US Pub. 2003/0231329).

The cited references fail, even when considered in combination, to disclose, either expressly or implicitly, each and every feature of the claimed embodiments.

Consider claim 12, which recites in part:

if the request is a request to connect a computer to the requested peripheral device and the requested peripheral device is accessible,
instantiating the connection class to create an object specific to the requested peripheral device,
using the instantiated object to cause a native driver of the requested peripheral device to execute, and

The Office Action relies upon Khanna the PPI interface, discussed in paragraphs [0017], [0024] and [0027] to disclose the claimed features. Khanna discusses a plug-in to plug-in interface (PPI) which is accessed by a device driver. *See*, for example, Khanna at paragraph [0038], which recites in part:

First, ***the application*** or OS ***send a resource access request to a driver*** or OPRM corresponding to the device the application or OS desires to access in a block 90. For example, suppose application 40 seeks to access device 44B, which has a corresponding device driver 44DD. Application 40 sends a resource access request (e.g., memory write) to device driver 44DD. ***The driver or OPRM then issues a resource access command to PPI interface 54,*** as provided by a block 92.

Accordingly, as also seen in FIGS. 4, 6 and 7, the application in Khanna accesses the driver which in turn access the PPI interface 54 to operate the peripherals. Thus, Khanna fails to disclose, either expressly or implicitly, the claimed "if the request is a request to connect a computer to the requested peripheral device and the requested peripheral device is accessible, ***instantiating the connection class*** to create an object specific to the requested peripheral device, ***using the instantiated object to cause a native driver of the requested peripheral device to execute.***" In other words, there is no evidence that the PPI interface 54 of Khanna causes the native driver of the requested peripheral device to execute, as asserted by the Office Action, since the driver 44DD in Khanna's system is accessed by the application or OS and the driver 44DD in Khanna's system executes the PPI interface 54.

The Office Action relies upon Edmunds to disclose determining whether the requested peripheral device is accessible.

Accordingly, a *prima facie* case of obviousness cannot be based upon Khanna and Edmunds because there is no evidence that one of ordinary skill in the art would combine Khanna's PPI interface and Edmunds beacon printer interface, and modify the combination to include the claimed "if the request is a request to connect a computer to the requested peripheral device and the requested peripheral device is accessible, ***instantiating the connection class*** to create an object specific to the requested peripheral device, ***using the instantiated object to cause a native driver of the requested peripheral device to execute,***" as recited in claim 12.

For the foregoing reasons, withdrawal of the rejection of claim 12 is respectfully requested. Dependent claim 13 refers to independent claim 12, and therefore patentably distinguishes over the cited references.

Claims 14 and 16-20 are rejected under 35 USC 103(a) as being unpatentable over Edmonds (US Pub. 2003/0231329) in view of Allen (USP 6,934,956).

The cited references, even when considered in combination, fail to disclose, either expressly or implicitly, each and every feature of the claimed embodiments.

Consider claim 14, which recites:

a mobile computer configured to provide an interface used by an application to access the at least one peripheral device, to use ***the interface to call a plurality of generic routines*** as a function of a request for a feature, ***the generic routines to cause the native driver, installed on the mobile computer, to execute and control the peripheral device*** and perform a specific feature corresponding to the feature requested based upon the parameters of the peripheral device, the interface being independent of device-specific features of the at least one peripheral device

The Office Action relies upon the generic driver interface discussed in paragraph [0010] to [0011] of Edmunds to disclose the claimed interface. Paragraphs [0010] to [0011] of Edmunds recites, in part:

A USB printer driver, according to another aspect of the invention, ***includes a generic driver*** for generating a print job in a page description language for

each of a plurality of different printer types, a detector for detecting any USB enabled printers connected to a USB port on a host device; ...

The ***USB printer driver combines a generic driver interface and automated USB printing device detection***. The USB printer driver allows a user to automatically print to a USB connected printer at print time. ...

Accordingly, the generic driver interface of Edmunds uses a generic USB driver to access a USB enabled printer attached to a computer. Accordingly, Edmunds fails to disclose, either expressly or implicitly, the claimed "interface to call a plurality of generic routines as a function of a request for a feature, ***the generic routines to cause the native driver***, installed on the mobile computer, ***to execute and control the peripheral device***," because Edmunds uses a generic USB driver and not the native driver of the device to operate the USB printers.

The Office Action merely relies upon Allen to disclose that "a driver contains information needed to send output to and/or receive input from the device. Thus, for example, when a computer sends a print job to the printer, the computer could do so through the printer driver using the correct parameters."

Accordingly, a *prima facie* case of obviousness cannot be based upon Edmunds and Allen because there is no evidence that one of ordinary skill in the art would combine Edmunds generic USB driver and generic USB driver interface with Allen's disclosure of driver parameters, and modify the combination to include the claimed "interface to call a plurality of generic routines as a function of a request for a feature, ***the generic routines to cause the native driver***, installed on the mobile computer, ***to execute and control the peripheral device***," as recited in claim 14.

For the foregoing reasons, withdrawal of the rejection of claim 14 is respectfully requested. The dependent claims refer to independent claim 14, and therefore patentably distinguish over the cited references.

Claim 10 is rejected under 35 USC 103(a) as being unpatentable over Vasudevan (US Pub. 2004/0225805) in view of Allen (USP 6,934,956) and further in view of Dorris (USP 5,867,710).

Dependent claim 10 refers to independent claim 1, and therefore patentably distinguishes over the cited references.

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CONCLUSION

All outstanding rejections have been overcome. It is respectfully submitted that, in view of the foregoing amendments and remarks, the application is in clear condition for allowance. Issuance of a Notice of Allowance is earnestly solicited.

Although not believed necessary, the Office is hereby authorized to charge any fees required under 37 C.F.R. § 1.16 or § 1.17 or credit any overpayments to Deposit Account No. 11-0600.

The Office is invited to contact the undersigned at 202-220-4200 to discuss any matter regarding this application.

Respectfully submitted,

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